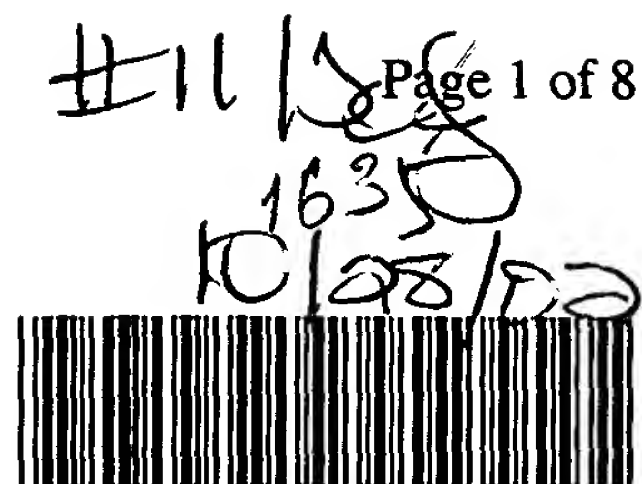


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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/721,414C

DATE: 10/16/2002

TIME: 15:23:35

Input Set : A:\EP.txt

Output Set: N:\CRF4\10162002\I721414C.raw

3 <110> APPLICANT: Suga, Hiroaki
5 <120> TITLE OF INVENTION: Catalytic RNA Molecules with Aminoacylation Activity
7 <130> FILE REFERENCE: 11520.0222
9 <140> CURRENT APPLICATION NUMBER: US 09/721,414C
10 <141> CURRENT FILING DATE: 2000-11-22
12 <150> PRIOR APPLICATION NUMBER: US 60/167,331
13 <151> PRIOR FILING DATE: 1999-11-24
14 <150> PRIOR APPLICATION NUMBER: US 60/214,382
15 <151> PRIOR FILING DATE: 2000-06-28
17 <160> NUMBER OF SEQ ID NOS: 22

19 <210> SEQ ID NO: 1
20 <211> LENGTH: 110
21 <212> TYPE: DNA
22 <213> ORGANISM: artificial sequence
24 <220> FEATURE:

W--> 25 <221> NAME/KEY: n

26 <222> LOCATION: 21-90

27 <223> OTHER INFORMATION: synthetic oligonucleotide containing random pool of 70 nucleotides; n

28 represents a,t,g or c.

30 <400> SEQUENCE: 1

W--> 31 ggatcgctcag tgcattgaga nnnnnnnnnn nnnnnnnnnn 40

W--> 32 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 80

W--> 33 nnnnnnnnnn ggtgggtatcc ccaaggggta 110

35 <210> SEQ ID NO: 2

36 <211> LENGTH: 76

37 <212> TYPE: DNA

38 <213> ORGANISM: artificial sequence

40 <220> FEATURE:

41 <223> OTHER INFORMATION: completely synthesized primer complementary to the otrNAGln

43 <400> SEQUENCE: 2

44 tggctgcggt acgaggattc gaacctcgga atgccggatt 40

45 tagaaatccg gtcccttacc ccttggggat accacc 76

48 <210> SEQ ID NO: 3

49 <211> LENGTH: 52

50 <212> TYPE: DNA

51 <213> ORGANISM: artificial sequence

53 <220> FEATURE:

54 <223> OTHER INFORMATION: 5' primer containing T7 promoter sequence

56 <400> SEQUENCE: 3

57 ggtaacacgc atatgtaata cgactcacta taggatcgtc 40

58 agtgcattga ga 52

60 <210> SEQ ID NO: 4

61 <211> LENGTH: 20

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RAW SEQUENCE LISTING

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PATENT APPLICATION: US/09/721,414C

TIME: 15:23:35

Input Set : A:\EP.txt

Output Set: N:\CRF4\10162002\I721414C.raw

62 <212> TYPE: DNA
 63 <213> ORGANISM: artificial sequence
 65 <220> FEATURE:
 66 <223> OTHER INFORMATION: 3'completely synthesized primer
 68 <400> SEQUENCE: 4
 69 tggctgcggt acgaggattc 20
 71 <210> SEQ ID NO: 5
 72 <211> LENGTH: 146
 73 <212> TYPE: RNA
 74 <213> ORGANISM: artificial sequence
 76 <220> FEATURE:
 77 <223> OTHER INFORMATION: pre-12 catalytic RNA
 79 <400> SEQUENCE: 5
 80 ggauugcag ugcuuugaga uuuccgcagc ccuucucacu 40
 81 aacggugggu cauggguauu ggcguuagg ggcgggaugc 80
 82 acgcuggugg uauccccaag gguacgggac cggacauucg 120
 83 agauucgaau ccucguaccg cagcca 146
 86 <210> SEQ ID NO: 6
 87 <211> LENGTH: 151
 88 <212> TYPE: RNA
 89 <213> ORGANISM: artificial sequence
 91 <220> FEATURE:
 W--> 92 <221> NAME/KEY: n
 93 <222> LOCATION: 12
 94 <223> OTHER INFORMATION: pre-38 catalytic RNA; n represents a,u,g or c
 96 <400> SEQUENCE: 6
 W--> 97 ggauugcag uncauugaga uuuccgcagc ccuucucacu 40
 98 aacggugggu ucauggguau uggcguuagg ugcgggaugc 80
 99 uacuacgcug gugguauccc caagggguacg ggaccggauc 120
 100 auucgagauu cgaauccucg uaccgcagcc a 151
 103 <210> SEQ ID NO: 7
 104 <211> LENGTH: 150
 105 <212> TYPE: RNA
 106 <213> ORGANISM: artificial sequence
 109 <220> FEATURE:
 110 <223> OTHER INFORMATION: pre-29 catalytic RNA
 112 <400> SEQUENCE: 7
 113 ggauugcag ugcuuugaga uuuccgcagg ccuucucac 40
 114 uaacgguggg ucauggguau uggcguuagg ugcgggaugc 80
 115 uacuacgcug gugguauccc caagggguacg ggaccggaca 120
 116 uucgagauuc gaaucucgu accgcagcca 150
 118 <210> SEQ ID NO: 8
 119 <211> LENGTH: 150
 120 <212> TYPE: RNA
 121 <213> ORGANISM: artificial sequence
 123 <220> FEATURE:
 124 <223> OTHER INFORMATION: pre-36 catalytic RNA
 126 <400> SEQUENCE: 8
 127 ggauugcag ugcuuugaga uuuccgcagc ccuucucacu 40

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RAW SEQUENCE LISTING

DATE: 10/16/2002

PATENT APPLICATION: US/09/721,414C

TIME: 15:23:35

Input Set : A:\EP.txt

Output Set: N:\CRF4\10162002\I721414C.raw

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128 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
129 acuacgcugg ugguaucucc aaggguaacgg gaccggauca      120
130 uucgagauuc gaauccucgu accgcagcca      150
132 <210> SEQ ID NO: 9
133 <211> LENGTH: 150
134 <212> TYPE: RNA
135 <213> ORGANISM: artificial sequence
137 <220> FEATURE:
138 <223> OTHER INFORMATION: pre-24 catalytic RNA
140 <400> SEQUENCE: 9
141 ggaucgucag ugcauugaga uuuccgcagg ccuucucac      40
142 uaacgguggg ucauggguau uggcguuagg ugcgggaugc      80
143 uacuacgcug gugguaucucc caaggguaacg ggaccggaca      120
144 uucgagauuc gaauccucgu accgcagcca      150
146 <210> SEQ ID NO: 10
147 <211> LENGTH: 149
148 <212> TYPE: RNA
149 <213> ORGANISM: artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: pre-25 catalytic RNA
154 <400> SEQUENCE: 10
155 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
156 aacggugggu cauggguauu ggcguuaggu gcgggauacu      80
157 acuacgcugg ugguaucucc aaggguaacgg gaccggacau      120
158 ucgagauucg aauccucgua ccgcagcca      149
161 <210> SEQ ID NO: 11
162 <211> LENGTH: 149
163 <212> TYPE: RNA
164 <213> ORGANISM: artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: pre-22 catalytic RNA
169 <400> SEQUENCE: 11
170 ggaucgucag ugcauugaga uuuccgcagc ccuucucacu      40
171 aacggugggu cauggguguu ggcguuaggu gcgggaugcu      80
172 acuacgcugg ugguaucucc aaggguaacgg gaucggacau      120
173 ucgagauucg aauccucgua ccgcagcca      149
176 <210> SEQ ID NO: 12
177 <211> LENGTH: 149
178 <212> TYPE: RNA
179 <213> ORGANISM: artificial Sequence
181 <220> FEATURE:
W--> 182 <221> NAME/KEY: n
183 <222> LOCATION: 112
184 <223> OTHER INFORMATION: pre-5 catalytic RNA; n represents a,u,g or c
186 <400> SEQUENCE: 12
187 ggaucgucag ugcauugaga uuuccgcagc ccucucacu      40
188 aacggugggu cauggguauu ggcguuaggu gcgggaugcu      80
W--> 189 acuacgcugg ugguaucucc aaggguaacgg gnccggacau      120
190 ucgagauucg aauccucgua ccgcagcca      149

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RAW SEQUENCE LISTING

DATE: 10/16/2002

PATENT APPLICATION: US/09/721,414C

TIME: 15:23:35

Input Set : A:\EP.txt

Output Set: N:\CRF4\10162002\I721414C.raw

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193 <210> SEQ ID NO: 13
194 <211> LENGTH: 149
195 <212> TYPE: RNA
196 <213> ORGANISM: artificial Sequence
198 <220> FEATURE:
199 <223> OTHER INFORMATION: pre-19 catalytic RNA
201 <400> SEQUENCE: 13
202 ggauugcagc ugcauugaga uuuccgcagc ccuucucacu      40
203 aacggguaggu cauggguauu ggcguuaggu gcggggaugcu      80
204 acuacgcugg ugguauccccc aaggguacgg gaccggacau      120
205 ucgagauucg aauccucgua ccgcagcca      149
208 <210> SEQ ID NO: 14
209 <211> LENGTH: 150
210 <212> TYPE: RNA
211 <213> ORGANISM: artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: pre-8 catalytic RNA
216 <400> SEQUENCE: 14
217 ggauugcagc ugcauugaga uuuccgcagc ccuucucacu      40
218 aacgggugggu ucauggguau uggcguuagg ugcgggaugc      80
219 uacuacgcug gugguauccu caaggguacg ggaccggaca      120
220 uucuagauuc gaauccucgu accgcagcca      150
223 <210> SEQ ID NO: 15
224 <211> LENGTH: 148
225 <212> TYPE: RNA
226 <213> ORGANISM: artificial Sequence
228 <220> FEATURE:
229 <223> OTHER INFORMATION: pre-23 catalytic RNA
231 <400> SEQUENCE: 15
232 ggauugcagc ugcauugaga uuuccgcagc ccuucucacu      40
233 aacgggugggu cauggguauu ggcguuaggu gcggggaugcu      80
234 acuacgcugg ugguauccca agggguacggg accggacauu      120
235 cgagauucga auccucguac cgcagcca      148
238 <210> SEQ ID NO: 16
239 <211> LENGTH: 75
240 <212> TYPE: RNA
241 <213> ORGANISM: Escherichia coli
243 <220> FEATURE:
244 <223> OTHER INFORMATION: otRNA
246 <400> SEQUENCE: 16
247 ggugguaucc ccaaggggua agggaccgga uucuaaaucc      40
248 ggcauuccga gguucgaau cugcuaccgc agcca      75
250 <210> SEQ ID NO: 17
251 <211> LENGTH: 160
252 <212> TYPE: RNA
253 <213> ORGANISM: artificial sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: H2 Leu catalytic RNA
258 <400> SEQUENCE: 17

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/721,414C

DATE: 10/16/2002

TIME: 15:23:35

Input Set : A:\EP.txt

Output Set: N:\CRF4\10162002\I721414C.raw

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259 ggauugcag ugcauugaga ugcccaaagc ccuucucacu      40
260 uccggugggu caugcguaau ugcguuaggu gaggaaugcu      80
261 agauugcggg ugguauccea gggguaaggg accggaauuc     120
262 aaauugcgau uccgagguuc gaauccucgu accgcagcca     160
264 <210> SEQ ID NO: 18
265 <211> LENGTH: 156
266 <212> TYPE: RNA
267 <213> ORGANISM: artificial sequence
269 <220> FEATURE:
270 <223> OTHER INFORMATION: D1-Leu catalytic RNA
272 <400> SEQUENCE: 18
273 ggauugcag ugcauugaga uagugucacu aggcgggggg      40
274 ugauagcgca uuuugagguu ugguuugggg gguuauugcu      80
275 gaguucuugg gugguaucce agggguaagg gaucuaaauc     120
276 cgacauuccg agguucgaau ccucguaccg cagcca         156
279 <210> SEQ ID NO: 19
280 <211> LENGTH: 35
281 <212> TYPE: RNA
282 <213> ORGANISM: artificial sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: RNA forming a minihelix
287 <400> SEQUENCE: 19
288 ggugguacga gguucgaau cucguaccgc agcca           35
290 <210> SEQ ID NO: 20
291 <211> LENGTH: 73
292 <212> TYPE: RNA
293 <213> ORGANISM: artificial sequence
295 <220> FEATURE:
296 <223> OTHER INFORMATION: V1 variant of otrNA
298 <400> SEQUENCE: 20
299 ggugguaucc ccaagggua gggaccggau ucuaaauccg      40
300 gcauucgaga uucgaauccu cguaccgcag cca            73
302 <210> SEQ ID NO: 21
303 <211> LENGTH: 75
304 <212> TYPE: RNA
305 <213> ORGANISM: artificial sequence
307 <220> FEATURE:
308 <223> OTHER INFORMATION: V2 variant of otrNA
310 <400> SEQUENCE: 21
311 ggugguaucc ccaagggua cgggaccgga uucuaaaucc      40
312 ggcauuccga gauucgaau cucguaccgc agcca           75
315 <210> SEQ ID NO: 22
316 <211> LENGTH: 73
317 <212> TYPE: RNA
318 <213> ORGANISM: artificial sequence
320 <220> FEATURE:
321 <223> OTHER INFORMATION: V3 variant of otrNA
323 <400> SEQUENCE: 22
325 ggugguaucc ccaaggguaa gggaccggau ucuaaauccg      40

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/16/2002
PATENT APPLICATION: US/09/721,414C TIME: 15:23:36

Input Set : A:\EP.txt
Output Set: N:\CRF4\10162002\I721414C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40
Seq#:1; N Pos. 41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60
Seq#:1; N Pos. 61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80
Seq#:1; N Pos. 81,82,83,84,85,86,87,88,89,90/
Seq#:6; N Pos. 12/
Seq#:12; N Pos. 112